

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Patent Application US/07/661,070

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Huston, James S
Charette, Marc F
Cohen, Charles M
Crea, Roberto
Keck, Peter C
Oppermann, Hermann
Rueger, David C
Ridge, Richard J

(ii) TITLE OF INVENTION: Product and Process for the Production,
Isolation and Purification of Recombinant Polypeptides

(iii) NUMBER OF SEQUENCES: 14

(iv) CORRESPONDENCE ADDRESS:

- (A) ADDRESSEE: Creative BioMolecules
- (B) STREET: 35 South Street
- (C) CITY: Hopkinton
- (D) STATE: MA
- (E) COUNTRY: USA
- (F) ZIP: 01748

(v) COMPUTER READABLE FORM:

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US 07/661,070
(B) FILING DATE: 26-FEB-1991
(C) CLASSIFICATION: 435/68
 536/27
 530/300
 530/350

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Lunn, Paul G.
(B) REGISTRATION NUMBER: 32,743
(C) REFERENCE/DOCKET NUMBER: CRP-008DV

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (508) 435-9001
(B) TELEFAX: (508) 435-6951

(2) INFORMATION FOR SEQ ID NO:1:

Patent Application US/07/661,070

54 (i) SEQUENCE CHARACTERISTICS:
55 (A) LENGTH: 4 amino acids
56 (B) TYPE: amino acid
57 (C) STRANDEDNESS: single
58 (D) TOPOLOGY: linear
59
60 (ii) MOLECULE TYPE: peptide
61
62 (iii) HYPOTHETICAL: NO
63
64 (iv) ANTI-SENSE: NO
65
66 (v) FRAGMENT TYPE: internal
67
68
69
70 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
71
72 Ile Glu Gly Arg
73 1
74
75 (2) INFORMATION FOR SEQ ID NO:2:
76
77 (i) SEQUENCE CHARACTERISTICS:
78 (A) LENGTH: 21 base pairs
79 (B) TYPE: nucleic acid
80 (C) STRANDEDNESS: double
81 (D) TOPOLOGY: linear
82
83 (ii) MOLECULE TYPE: cDNA
84
85 (iii) HYPOTHETICAL: NO
86
87 (iv) ANTI-SENSE: NO
88
89 (v) FRAGMENT TYPE: N-terminal
90
91
92 (ix) FEATURE:
93 (A) NAME/KEY: CDS
94 (B) LOCATION: 1..21
95
96
97 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
98
99 GCT AAA AAC CTT AAC GAA GCT 21
100 Ala Lys Asn Leu Asn Glu Ala
101 1 5
102
103
104 (2) INFORMATION FOR SEQ ID NO:3:
105
106 (i) SEQUENCE CHARACTERISTICS:

Patent Application US/07/661,070

107 (A) LENGTH: 7 amino acids
108 (B) TYPE: amino acid
109 (D) TOPOLOGY: linear
110
111 (ii) MOLECULE TYPE: protein
112
113 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
114

115 Ala Lys Asn Leu Asn Glu Ala
116 1 5

117
118 (2) INFORMATION FOR SEQ ID NO:4:

119
120 (i) SEQUENCE CHARACTERISTICS:
121 (A) LENGTH: 13 amino acids
122 (B) TYPE: amino acid
123 (C) STRANDEDNESS: single
124 (D) TOPOLOGY: linear
125

126 (ii) MOLECULE TYPE: peptide
127

128 (iii) HYPOTHETICAL: NO

129 (iv) ANTI-SENSE: NO

130 (v) FRAGMENT TYPE: internal
131

132
133
134
135
136 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
137

138 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Glu
139 1 5 10
140

141 (2) INFORMATION FOR SEQ ID NO:5:

142
143 (i) SEQUENCE CHARACTERISTICS:
144 (A) LENGTH: 16 amino acids
145 (B) TYPE: amino acid
146 (C) STRANDEDNESS: single
147 (D) TOPOLOGY: linear
148

149 (ii) MOLECULE TYPE: peptide
150

151 (iii) HYPOTHETICAL: NO

152 (iv) ANTI-SENSE: NO

153 (v) FRAGMENT TYPE: internal
154

155
156
157
158
159 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Patent Application US/07/661,070

160
161 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Arg Asp Leu Glu
162 1 5 10 15
163
164

165 (2) INFORMATION FOR SEQ ID NO:6:

166
167 (i) SEQUENCE CHARACTERISTICS:
168 (A) LENGTH: 59 amino acids
169 (B) TYPE: amino acid
170 (C) STRANDEDNESS: single
171 (D) TOPOLOGY: linear
172

173 (ii) MOLECULE TYPE: protein
174

175 (iii) HYPOTHETICAL: NO
176

177 (iv) ANTI-SENSE: NO
178

179 (v) FRAGMENT TYPE: N-terminal
180
181
182

183 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:
184

185 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Arg Asp Leu Asp
186 1 5 10 15
187

188 Ser Arg Leu Asp Leu Asp Val Arg Thr Asp His Lys Asp Leu Ser Asp
189 20 25 30
190

191 His Leu Val Leu Val Asp Leu Ala Arg Asn Asp Leu Ala Arg Ile Val
192 35 40 45
193

194 Thr Pro Gly Ser Arg Tyr Val Ala Asp Leu Glu
195 50 55
196

197 (2) INFORMATION FOR SEQ ID NO:7:
198

199 (i) SEQUENCE CHARACTERISTICS:
200 (A) LENGTH: 4 amino acids
201 (B) TYPE: amino acid
202 (C) STRANDEDNESS: single
203 (D) TOPOLOGY: linear
204

205 (ii) MOLECULE TYPE: peptide
206

207 (iii) HYPOTHETICAL: NO
208

209 (iv) ANTI-SENSE: NO
210

211 (v) FRAGMENT TYPE: internal
212

Patent Application US/07/661,070

213
214
215 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:
216
217 Glu Phe Met Arg
218 1
219
220 (2) INFORMATION FOR SEQ ID NO:8:
221
222 (i) SEQUENCE CHARACTERISTICS:
223 (A) LENGTH: 10 amino acids
224 (B) TYPE: amino acid
225 (C) STRANDEDNESS: single
226 (D) TOPOLOGY: linear
227
228 (ii) MOLECULE TYPE: peptide
229
230 (iii) HYPOTHETICAL: NO
231
232 (iv) ANTI-SENSE: NO
233
234 (v) FRAGMENT TYPE: internal
235
236
237
238 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:
239
240 Glu Phe Asp Pro Pro Pro Lys Phe Met Arg
241 1 5 10
242
243 (2) INFORMATION FOR SEQ ID NO:9:
244
245 (i) SEQUENCE CHARACTERISTICS:
246 (A) LENGTH: 13 amino acids
247 (B) TYPE: amino acid
248 (C) STRANDEDNESS: single
249 (D) TOPOLOGY: linear
250
251 (ii) MOLECULE TYPE: peptide
252
253 (iii) HYPOTHETICAL: NO
254
255 (iv) ANTI-SENSE: NO
256
257 (v) FRAGMENT TYPE: internal
258
259
260
261 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:
262
263 Glu Phe Asp Pro Pro Pro Met Pro Arg Lys Phe Met Arg
264 1 5 10
265

Patent Application US/07/661,070

266 (2) INFORMATION FOR SEQ ID NO:10:

267
268 (i) SEQUENCE CHARACTERISTICS:
269 (A) LENGTH: 20 amino acids
270 (B) TYPE: amino acid
271 (C) STRANDEDNESS: single
272 (D) TOPOLOGY: linear
273

274 (ii) MOLECULE TYPE: peptide
275

276 (iii) HYPOTHETICAL: NO
277

278 (iv) ANTI-SENSE: NO
279

280 (v) FRAGMENT TYPE: internal
281

282
283
284 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

285
286 Glu Phe Asp Pro Pro Pro Met Pro Arg Met Pro Asp Pro Glu Leu Arg
287 1 5 10 15
288
289 Lys Phe Met Arg
290 20
291

292 (2) INFORMATION FOR SEQ ID NO:11:

293
294 (i) SEQUENCE CHARACTERISTICS:
295 (A) LENGTH: 193 amino acids
296 (B) TYPE: amino acid
297 (C) STRANDEDNESS: single
298 (D) TOPOLOGY: linear
299

300 (ii) MOLECULE TYPE: protein
301

302 (iii) HYPOTHETICAL: NO
303

304 (iv) ANTI-SENSE: NO
305

306 (v) FRAGMENT TYPE: N-terminal
307
308
309

310 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

311
312 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Arg Asp Leu Asp
313 1 5 10 15
314

315 Ser Arg Ile Glu Leu Glu Met Arg Thr Asp His Lys Glu Leu Ser Glu
316 20 25 30

317 His Leu Met Leu Val Asp Leu Ala Arg Asn Asp Leu Ala Arg Ile Cys
318

Patent Application US/07/661,070

319 35 40 45
320
321 Thr Pro Gly Ser Arg Tyr Val Ala Asp Leu Thr Lys Val Asp Arg Tyr
322 50 55 60
323
324 Ser Tyr Val Met His Leu Val Ser Arg Val Val Gly Glu Leu Arg His
325 65 70 75 80
326
327 Asp Leu Asp Ala Leu His Ala Tyr Arg Ala Cys Met Asn Met Gly Thr
328 85 90 95
329
330 Leu Ser Gly Ala Pro Lys Val Arg Ala Met Gln Leu Ile Ala Glu Ala
331 100 105 110
332
333 Glu Gly Arg Arg Arg Gly Ser Tyr Gly Gly Ala Val Gly Tyr Phe Thr
334 115 120 125
335
336 Ala His Gly Asp Leu Asp Thr Cys Ile Val Ile Arg Ser Ala Leu Val
337 130 135 140
338
339 Glu Asn Gly Ile Ala Thr Val Gln Ala Gly Ala Gly Val Val Leu Asp
340 145 150 155 160
341
342 Ser Val Pro Gln Ser Glu Ala Asp Glu Thr Arg Asn Lys Ala Arg Ala
343 165 170 175
344
345 Val Leu Arg Ala Ile Ala Thr Ala His His Ala Gln Glu Phe Pro Gly
346 180 185 190
347
348 Glu
349
350
351 (2) INFORMATION FOR SEQ ID NO:12:
352
353 (i) SEQUENCE CHARACTERISTICS:
354 (A) LENGTH: 59 amino acids
355 (B) TYPE: amino acid
356 (C) STRANDEDNESS: single
357 (D) TOPOLOGY: linear
358
359 (ii) MOLECULE TYPE: protein
360
361 (iii) HYPOTHETICAL: NO
362
363 (iv) ANTI-SENSE: NO
364
365 (v) FRAGMENT TYPE: N-terminal
366
367
368
369 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:
370
371 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Arg Asp Leu Asp

Raw Sequence Listing
Patent Application US/07/661,070

04/22/91
09:27:46

372 1 5 10 15
373
374 Ser Arg Leu Asp Leu Asp Val Arg Thr Asp His Lys Asp Leu Ser Asp
375 20 25 30
376
377 His Leu Val Leu Val Asp Leu Ala Arg Asn Asp Leu Ala Arg Ile Val
378 35 40 45
379
380 Thr Pro Gly Ser Arg Tyr Val Ala Asp Leu Glu
381 50 55
382

383 (2) INFORMATION FOR SEQ ID NO:13:

384
385 (i) SEQUENCE CHARACTERISTICS:
386 (A) LENGTH: 21 amino acids
387 (B) TYPE: amino acid
388 (C) STRANDEDNESS: single
389 (D) TOPOLOGY: linear
390
391 (ii) MOLECULE TYPE: peptide
392
393 (iii) HYPOTHETICAL: NO
394
395 (iv) ANTI-SENSE: NO
396
397 (v) FRAGMENT TYPE: internal
398
399
400

401 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

402
403 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Arg Asp Leu Glu
404 1 5 10 15
405
406 Phe Met Pro Pro Cys
407 20
408

409 (2) INFORMATION FOR SEQ ID NO:14:

410
411 (i) SEQUENCE CHARACTERISTICS:
412 (A) LENGTH: 19 amino acids
413 (B) TYPE: amino acid
414 (C) STRANDEDNESS: single
415 (D) TOPOLOGY: linear
416
417 (ii) MOLECULE TYPE: peptide
418
419 (iii) HYPOTHETICAL: NO
420
421 (iv) ANTI-SENSE: NO
422
423 (v) FRAGMENT TYPE: internal
424

Raw Sequence Listing
Patent Application US/07/661,070

04/22/91
09:27:53

425
426
427 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:
428
429 Met Lys Ala Ile Phe Val Leu Lys Gly Ser Leu Asp Arg Asp Leu Glu
430 1 5 10 15
431
432 Phe Met Cys
433

PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/07/661,070

DATE: 04/22/91
TIME: 09:27:54

LINE ERROR

ORIGINAL TEXT

35 Wrong application Serial Number
36 Wrong Filing Date
37 Wrong Classification

(A) APPLICATION NUMBER: US 07/661,070
(B) FILING DATE: 26-FEB-1991
(C) CLASSIFICATION: 435/68

PAGE: 1

SEQUENCE MISSING ITEM REPORT
PATENT APPLICATION US/07/661,070

DATE: 04/22/91
TIME: 09:27:54

MANDATORY IDENTIFIER THAT WAS NOT FOUND

PRIOR APPLICATION DATA
APPLICATION NUMBER
FILING DATE

PAGE: 1

SEQUENCE CORRECTION REPORT
PATENT APPLICATION US/07/661,070

DATE: 04/22/91

TIME: 09:27:54

LINE ORIGINAL TEXT

CORRECTED TEXT